

NASA scientist develops new pilot training tool

A NASA scientist has developed a prototype of a software program that helps pilots learn how to fly advanced commercial aircraft using a laptop computer.

Developed by Steve Casner, a researcher at the Ames Research Center, the program mimics the flight management system of an automated "glass" cockpit and allows flight training professionals to program their own learning materials and exercises for students. The program operates on a Macintosh computer.

"This is basically an electronic tutor that supports pilots in their training and in the ongoing learning process," Casner said. "Because of the decreasing size and increasing power of small computers, we are able to incorporate a tremendous amount of information into a small package and provide more learning opportunities. These opportunities can take place anywhere and at any time—whenever the need for further information or practice arises."

Casner spent two years working to

emulate the program found in the aircraft's flight management computer.

The software program features five windows: a control/display unit, mode control panel, two maps showing the aircraft's lateral track and its vertical track, and a flight mode enunciator showing which flight systems are currently controlling the airplane. In addition, there is a section to the right of the control/display unit for inputting text and carrying on a dialogue with the pilots. The software program is designed to utilize

video, audio and film clips to illustrate various flight sequences.

"When we want to demonstrate something, small versions of charts, videos and photos can be programmed into the laptop," Casner said. "My intent was to provide a platform that can be expanded by flight instructors and other pilots to meet their training needs."

"As airplane systems become more complex, the training challenges for airline companies and pilots increase," Casner said. "Our

goal is to investigate new technologies and techniques that can help meet those challenges. Tools such as the laptop training device give pilots an opportunity to learn more on their own, to complement traditional classroom and flight simulation training."

Casner has demonstrated the new program to several major U.S. airlines and received inquiries from foreign carriers. He plans to test the program in a major airline's pilot training program.



PLAID PARTING—The International Space Station Program's Dale Thomas pretends to strangle coworker Mark McDonald, who was the "arch-architect" of going-away caper that involved making Thomas' beloved red Corvette into a plaid vehicle. The group had just come from a Vehicle Integrated Process Team meeting, where McDonald had given a presentation for a proposal "to relieve stress by painting employees' cars to match their personalities." Thomas, who is well-known for his plaid ties, later ripped open the case of Moon Pies on the roof of the Corvette, and tossed them to everyone. Thomas is heading home to Alabama, where such treats are even more common than in Texas.

STS-1 anniversary party expands again

JSC's "Liftoff Party" celebrating the 15th anniversary of STS-1 and set for April 12, has been expanded to include additional entertainers, art exhibits and a special message from Cosmonaut Researcher Shannon Lucid aboard the Mir Space Station.

The party, a combined celebration of human space flight, the rich traditions of the Russian and American space programs and their new partnership, is being held in conjunction with an all-day Saturday festival sponsored by City of Nassau Bay, the sister city of Star City, Russia. April 12 is the 35th anniversary of the first manned Russian rocket launch of Yuri Gagarin. JSC and Nassau Bay have combined their events.

The party will be held April 12 at Space Center Houston from 5-9 p.m. A short program will include guest speakers John Young, cosmonaut Vladimir Titov and a special message from Lucid. Exhibits will include photographs by Andrew "Pat" Patnesky, and selected artwork by Julia Felgman, Andre Sokolov and Alexei Leonov.

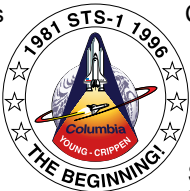
Nassau Bay's Saturday activities kick off at 6:30 a.m. with the launch of the space shuttle and Southwest Airlines hot-air balloons from Howard L. Ward Park. The

Russian Dance Troupe and Troika Band will play at 6:30 p.m. at the Nassau Bay Hilton, and a Russian Festival Farewell Banquet, featuring entertainment by the Eddie Adcock Band and Jack Bacon Choral Group, will begin at 7 p.m., also at the Hilton.

Tickets are on sale at the Bldg. 11 Exchange Store. Ticket prices for the combined festival at Space Center Houston, will be \$5 for ages 5 and up and are available through April 12. The first 1,000 tickets sold at the Exchange Store will include a commemorative button of the STS-1 15th anniversary. A limited number of tickets will be available for purchase at the door. Parking at SCH is free.

Admission will allow party-goers access to all exhibits and activities available at SCH, except tram tours. Snacks and soft drinks are included in the tickets, which also may be exchanged for beverage coupons. Optional food purchases can be made at the Silver Moon Cafe. Live entertainment will include a Russian Dance Troupe, Troika Band, the Lone Star Bluegrass Band and, now, the Max-Q astronaut band.

For more information call the Exchange Store at x35350, or Nassau Bay City Hall, 333-4211.



Garman top assistant for management

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the director of administration for Hernandez Engineering Co. In 1987, she joined JSC in the Administration Directorate. Since then, Garman has served in numerous key center and agency positions, including temporary

assignments on the NASA administrator's staff both as the executive assistant to the administrator and as the special assistant to the chief of staff; in various center procurement positions; and since May 1994, as executive assistant to the director at JSC.

The assignment follows a February announcement in which veteran astronaut John Young was named JSC associate director, technical. Young is responsible for technical, operations safety and oversight of all programs and activities at JSC.

Chilton says: 'The spirit of '76 is alive and well'

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during the rendezvous, during the EVA, during the undocking and during the landing," Chilton said. "The teamwork displayed and the support that each crew member gave each other was just spectacular. The spirit of '76 is alive and well."

Pilot Rick Searfoss said the flight's historical significance dawned on him as *Atlantis* was departing from the Mir.

"Mir was off on the horizon and I could just barely make out its shape, to tell that it was something other than just a little star out there," Searfoss said. "And then I realized—one of my friends is there, and she's going to stay for a long time, and there are going to be Americans in space for a long, long

time. It is just flabbergasting to me."

Payload Commander Ron Sega agreed, explaining that the doors opened by STS-76 will have far-reaching consequences.

"I think our flight will be remembered as an enabling flight, enabling Shannon and the U.S. to do long-duration studies on Mir that will continue and move on into the International Space Station era," Sega said.

Still, Searfoss added, he was most struck during the mission by a more down-to-Earth view. "The thing that most amazed me was not all the technical, wonderful things that happened in terms of this docking, but that the humans interacted right from the start—the folks that trained us and the crew."

STS-76 crew members Rich Clifford and Linda Godwin performed the first-ever space walk from a docked space shuttle during the flight, attaching several experiments to the outside of the Mir station and providing a glimpse of the International Space Station era.

"NASA is about making the difficult things look easy, and there is nothing routine about launching a space shuttle and making it work right on orbit," Clifford said. "It is a finely tuned act that is done right every time by the people here."

The crew's sentiments during the welcome home summed up by Godwin, who reminded the crowd that STS-76 continues.

"Our mission won't really be over until Shannon lands again in

August," Godwin said. "So we'll all be here again then to welcome her back."

Atlantis was towed off of Edwards' Runway 22 by late Sunday, and technicians plan to attempt a one-day cross-country ferry flight for the shuttle starting early today. Preliminary checks of *Atlantis* found the spacecraft in good condition, with no major problems evident that would slow its preparations for the fourth Mir docking mission, STS-79 in August. Early checks of the shuttle's engine compartment found a thin layer of hydraulic fluid in the area, the result of a known hydraulic leak during the mission, however the fluid appears to have done no damage to any components.

Trafton leads NASA's Office of Space Flight

Wilbur C. Trafton is now associate administrator for the Office of Space Flight, placing him in charge of NASA's Human Exploration and Development of Space Enterprise. Trafton had been acting associate administrator since Jan. 26.

"Wil brings great experience and leadership to this office," said NASA Administrator Daniel S. Goldin said last Thursday. "He's committed to a vibrant human space flight program that provides value and benefit to America."

As associate administrator for space flight, Trafton will be responsible for establishing the policies and direction of NASA's human space flight programs.

Trafton was named director of the International Space Station Program on Jan. 6, 1994. In that position he was responsible for overall planning, budgeting and management of the station, to be built and operated by the United States, Russia, the European Space Agency, Japan and Canada.

In January 1996, Trafton assumed additional responsibilities as the acting associate administrator for space flight. In his new capacity, Trafton will continue to fill both positions.

Prior to joining NASA, Trafton worked in both the public and private

sectors. From 1992-1993, he served as chief operating officer and president of Micro Research Industries, a state-of-the-art computer systems integration and software company in the Washington metropolitan area.

During a 26-year Navy career, Trafton held command and high level staff positions in areas of operations, acquisition, and international affairs. A naval aviator, he is a decorated combat veteran. He served as executive officer aboard the aircraft carrier U.S.S. Forrestal and as commander of the U.S.S. Seattle.

He was the executive assistant to the commander, Naval Air Systems Command, involved in the acquisition of major aviation systems. At the Pentagon, he served as team chief for contingency planning and crisis action for the Joint Chiefs of Staff. In that capacity, he conducted congressional and executive branch liaison duties for the chairman, Joint Chiefs of Staff, on international issues. As assistant chief-of-staff for plans and policy for the commander, U.S. Pacific Fleet, he coordinated international military and diplomatic negotiations with Pacific Rim nations, including Russia. Capt. Trafton led the team that planned and managed the withdrawal of U.S. naval forces from the Philippines.

NASA Television, Internet to cover Americans on Mir

NASA Television will resume weekly editions of its Mission Update program at 10:30 a.m. CST every Friday beginning today to review the week's developments aboard the Russian Space Station Mir and U.S. astronaut Shannon Lucid's 4-1/2 month stay aboard the Russian outpost.

In addition, weekly status and science status reports will be made available on a new NASA Shuttle-Mir Web site available on the World Wide Web segment of the Internet. The site can be accessed at the address:

<http://shuttle-mir.nasa.gov/>

Lucid's arrival on the Mir on March 23 inaugurated a permanent U.S. presence in space, both on the Mir by rotating U.S. astronauts for the next two years, and eventually with astronauts on the International

Space Station beginning in the spring of 1998.

Mission Update will focus on the research being conducted aboard the Mir and key developments leading to the assembly of the International Space Station starting in the fall of 1997. Video highlights of the week's activity aboard the Mir and feature interviews regarding both Mir and International Space Station work will be included in each week's program.

The NASA Shuttle-Mir Web site will provide a variety of information about the Phase 1 Program and its mission of cooperation, investigation and operation, serving as a bridge between the space shuttle and space station Web sites. As Americans continue their consecutive presence aboard Mir, the Shuttle-Mir Web will continue its coverage of their individual missions.

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